

SEQUENCE LISTING

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&lt;120&gt; Plant Diacylglycerol Acyltransferases

&lt;130&gt; BB1295

&lt;140&gt;

&lt;141&gt;

&lt;150&gt; 60/110,602

&lt;151&gt; 1998-12-02

&lt;150&gt; 60/127,111

&lt;151&gt; 1999-03-31

&lt;160&gt; 26

&lt;170&gt; Microsoft Office 97

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&lt;211&gt; 1888

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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Leu	Cys	Ile	Ala	Val	Pro	Cys	Arg	Leu	Phe	Lys	Leu	Trp	Ala	Phe	Leu	450	455	460
Gly	Ile	Met	Phe	Gln	Val	Pro	Leu	Val	Phe	Ile	Thr	Asn	Tyr	Leu	Gln	465	470	475
Glu	Arg	Phe	Gly	Ser	Thr	Val	Gly	Asn	Met	Ile	Phe	Trp	Phe	Ile	Phe	485	490	495
Cys	Ile	Phe	Gly	Gln	Pro	Met	Cys	Val	Leu	Leu	Tyr	Tyr	His	Asp	Leu	500	505	510
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Val Trp Leu Lys Leu Val Ser Phe Ala His Thr Asn His Asp Ile Gly  
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Cys Met Phe Tyr Cys Leu Phe His Leu Trp Leu Asn Ile Leu Ala Glu  
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Lys Thr Ile Asp Glu Tyr Trp Arg Lys Trp Asn Met Pro Val His Lys  
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Trp Ile Val Arg His Ile Tyr Phe Pro Cys Met Arg Asn Gly Ile Ser  
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Lys Glu Val Ala Val Phe Ile Ser Phe Phe Val Ser Ala Val Leu His  
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Glu Tyr Val Leu Leu Phe Leu His Ile Leu Lys Phe Trp Ala Phe Leu  
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Gly Ile Met Leu Gln Ile Pro Leu Ile Ile Leu Thr Ser Tyr Leu Lys  
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 Val Glu Thr Val Leu Lys Leu Ser Leu Pro Asn Val Tyr Leu Trp Leu  
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 Cys Met Phe Tyr Cys Leu Phe His Leu Trp Leu Asn Ile Leu Ala Glu  
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 Trp Ile Val Arg His Ile Tyr Phe Pro Cys Met Arg Asn Gly Ile Ser  
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Cys	Ile	Val	Trp	Leu	Lys	Leu	Val	Ser	Phe	Ala	His	Thr	Asn	His	Asp
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Ile	Arg	Lys	Leu	Ile	Thr	Ser	Gly	Lys	Lys	Val	Asp	Asn	Glu	Leu	Thr
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 acaagatatc tccatgctac gttcaagcat gtaatgggtg gcaacatgat attttggttc 780  
 ttcagtatag tccgacagcc gatgtngtgt ctctataact aacatgacgt catgaaacaa 840  
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Tyr Gly Asn Tyr Val Asp Pro Glu Asn Met Lys Asp Pro Thr Phe Lys  
35 40 45  
Ser Leu Val Tyr Phe Met Leu Ala Pro Thr Leu Cys Tyr Gln Pro Thr  
50 55 60  
Tyr Pro Gln Thr Thr Cys Ile Arg Lys Gly Trp Val Thr Gln Gln Leu  
65 70 75 80  
Ile Lys Cys Val Val Phe Thr Gly Leu Met Gly Phe Ile Ile Glu Gln  
85 90 95  
Tyr Ile Asn Pro Ile Val Lys Asn Ser Lys His Pro Leu Lys Gly Asn  
100 105 110  
Phe Leu Asn Ala Ile Glu Arg Val Leu Lys Leu Ser Val Pro Thr Leu  
115 120 125  
Tyr Val Trp Leu Cys Met Phe Tyr Cys Phe Phe His Leu Trp Leu Asn  
130 135 140  
Ile Val Ala Xaa Leu Leu Cys Phe Gly Asp Arg Glu Phe Tyr Lys Asp  
145 150 155 160  
Trp Trp Asn Xaa Lys Thr Val Glu Glu Tyr Trp Arg Met Trp Asn Met  
165 170 175  
Pro Val His Lys Trp Ile Ile Arg His Ile Tyr Phe Pro Cys Ile Arg  
180 185 190  
Xaa Gly Phe Ser Arg Gly Val Ala Ile Leu Ile Ser Phe Leu Val Ser  
195 200 205

Ala Val Phe His Glu Ile Cys Ile Ala Val Pro Cys His Ile Phe Lys  
 210 215 220

Phe Trp Ala Phe Ser Gly Ile Met Phe Gln Ile Pro Leu Val Phe Leu  
 225 230 235 240

Thr Arg Tyr Leu His Ala Thr Phe Lys His Val Met Val Gly Asn Met  
 245 250 255

Ile Phe Trp Phe Phe Ser Ile Val Arg Gln Pro Met Xaa Cys Leu Tyr  
 260 265 270

Asn Xaa His Asp Val Met Lys Gln Ala Arg Pro Ser Lys  
 275 280 285

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 <211> 254  
 <212> DNA  
 <213> Oryza sativa

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 <212> PRT  
 <213> Oryza sativa

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 20 25 30

Phe Lys Gln Ser His Ala Gly Leu Phe Asn Leu Cys Ile Val Val Leu  
 35 40 45

Val Ala Val Asn Ser Arg Leu Ile Ile Glu Asn Leu Met Lys Tyr Gly  
 50 55 60

Leu Leu Ile Arg Ala Gly Phe Trp Phe Asn Asp Lys Ser Leu Arg Asp  
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 <212> DNA  
 <213> Oryza sativa

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 caggcctttt caacctatgc attgttggtt tagttgcagt gaacagcagg cttattatcg 180  
 agaacttaat gaagtatggc ttattaataa gagctggggt ttggtttaat gataaatcat 240  
 tgcgggactg gccacttcta atgtgttggt ttagtctgcc tgctttcccc ctgggtgcat 300  
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tatacttcat gatggctcct acactctgtt atcagccaag ctatccccga acttcatgtg 660
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<210> 14
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<212> PRT
<213> Oryza sativa

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Asp Glu Ala Ala Pro Gly Ser Pro Pro Arg Pro Arg Pro Arg Pro Arg
      35                      40                      45

Pro Arg Gly Gly Asp Ser Asn Gly Arg Ser Val Leu Arg Pro Gly Gly
      50                      55                      60

Gly Gly Gly Arg Gly Gly Gly Gly Asp Phe Ser Ala Phe Thr Phe Arg
      65                      70                      75                      80

Ala Ala Ala Pro Val His Arg Lys Ala Lys Glu Ser Pro Leu Ser Ser
      85                      90                      95

Asp Ala Ile Phe Lys Gln Ser His Ala Gly Leu Phe Asn Leu Cys Ile
      100                      105                      110

Val Val Leu Val Ala Val Asn Ser Arg Leu Ile Ile Glu Asn Leu Met
      115                      120                      125

Lys Tyr Gly Leu Leu Ile Arg Ala Gly Phe Trp Phe Asn Asp Lys Ser
      130                      135                      140

Leu Arg Asp Trp Pro Leu Leu Met Cys Cys Leu Ser Leu Pro Ala Phe
      145                      150                      155                      160

Pro Leu Gly Ala Phe Ala Val Glu Lys Leu Ala Phe Asn Asn Val Ile
      165                      170                      175

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Thr Asp Ala Val Ala Thr Cys Leu His Ile Phe Leu Ser Thr Thr Glu  
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 Ile Val Tyr Pro Val Leu Val Ile Leu Lys Cys Asp Ser Ala Val Leu  
 195 200 205  
 Ser Gly Phe Leu Leu Ile Phe Ile Ala Cys Ile Val Trp Leu Lys Leu  
 210 215 220  
 Val Ser Phe Ala His Thr Asn His Asp Ile Arg Gln Leu Thr Met Gly  
 225 230 235 240  
 Gly Lys Lys Val Asp Asn Glu Leu Ser Thr Val Asp Met Asp Asn Leu  
 245 250 255  
 Gln Pro Pro Thr Leu Gly Asn Leu Ile Tyr Phe Met Met Ala Pro Thr  
 260 265 270  
 Leu Cys Tyr Gln Pro Ser Tyr Pro Arg Thr Ser Cys Val Arg Lys Gly  
 275 280 285  
 Trp Leu Ile Arg Gln Ile Ile Leu Tyr Leu Ile Phe Thr Gly Leu Gln  
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 Gly Phe Ile Ile Glu Gln Tyr Ile Asn Pro Ile Val Val Asn Ser Gln  
 305 310 315 320  
 His Pro Leu Lys Gly Gly Leu Leu Asn Ala Val Glu Thr Val Leu Lys  
 325 330 335  
 Leu Ser Leu Pro Asn Val Tyr Leu Trp Leu Cys Met Phe Tyr Ala Phe  
 340 345 350  
 Phe His Leu Trp Leu Ser Ile Leu Ala Glu Ile Leu Arg Phe Gly Asp  
 355 360 365  
 Arg Glu Phe Tyr Lys Asp Trp Trp Asn Ala Lys Thr Ile Asp Glu Tyr  
 370 375 380  
 Trp Arg Lys Trp Asn Met Pro Val His Lys Trp Val Val Arg His Ile  
 385 390 395 400  
 Tyr Phe Pro Cys Met Arg Asn Gly Ile Ser Lys Glu Val Ala Val Leu  
 405 410 415  
 Ile Ser Phe Leu Val Ser Ala Val Leu His Glu Ile Cys Val Ala Val  
 420 425 430  
 Pro Cys Arg Ile Leu Lys Phe Trp Ala Phe Leu Gly Ile Met Leu Gln  
 435 440 445  
 Ile Pro Leu Ile Val Leu Thr Ala Tyr Leu Lys Ser Lys Phe Arg Asp  
 450 455 460  
 Thr Met Val Gly Asn Met Ile Phe Trp Phe Phe Phe Cys Ile Tyr Gly  
 465 470 475 480  
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Glu Lys Ala Arg  
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<211> 1942  
<212> DNA  
<213> Glycine max

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cttcaattcg cctgagacaa ccaccgacag ttccgggtgat gacttggcca aggattctgg 180  
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atactaccat gacttgatga ataggaaagg caaacttgac tgaagctacg gccattacat 1560  
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aaaaaaaaaa aaaaaaaaaa aa 1942

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<211> 504  
<212> PRT  
<213> Glycine max

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20 25 30  
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35 40 45

Asp	Ser	Gly	Ser	Asp	Asp	Ser	Ile	Asn	Ser	Asp	Asp	Ala	Ala	Val	Asn	
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Ser	Gln	Gln	Gln	Asn	Glu	Lys	Gln	Asp	Thr	Asp	Phe	Ser	Val	Leu	Lys	
65					70					75					80	
Phe	Ala	Tyr	Arg	Pro	Ser	Val	Pro	Ala	His	Arg	Lys	Val	Lys	Glu	Ser	
				85					90					95		
Pro	Leu	Ser	Ser	Asp	Thr	Ile	Phe	Arg	Gln	Ser	His	Ala	Gly	Leu	Phe	
			100					105					110			
Asn	Leu	Cys	Ile	Val	Val	Leu	Val	Ala	Val	Asn	Ser	Arg	Leu	Ile	Ile	
		115					120					125				
Glu	Asn	Leu	Met	Lys	Tyr	Gly	Trp	Leu	Ile	Lys	Ser	Gly	Phe	Trp	Phe	
130						135					140					
Ser	Ser	Lys	Ser	Leu	Arg	Asp	Trp	Pro	Leu	Phe	Met	Cys	Cys	Leu	Ser	
145					150					155					160	
Leu	Val	Val	Phe	Pro	Phe	Ala	Ala	Phe	Ile	Val	Glu	Lys	Leu	Ala	Gln	
				165					170					175		
Arg	Lys	Cys	Ile	Pro	Glu	Pro	Val	Val	Val	Val	Leu	His	Ile	Ile	Ile	
			180					185					190			
Thr	Ser	Thr	Ser	Leu	Phe	Tyr	Pro	Val	Leu	Val	Ile	Leu	Arg	Cys	Asp	
		195					200					205				
Ser	Ala	Phe	Val	Ser	Gly	Val	Thr	Leu	Met	Leu	Phe	Ser	Cys	Val	Val	
	210					215					220					
Trp	Leu	Lys	Leu	Val	Ser	Tyr	Ala	His	Thr	Asn	Tyr	Asp	Met	Arg	Ala	
225					230					235					240	
Leu	Thr	Lys	Leu	Val	Glu	Lys	Gly	Glu	Ala	Leu	Leu	Asp	Thr	Leu	Asn	
			245						250					255		
Met	Asp	Tyr	Pro	Tyr	Asn	Val	Ser	Phe	Lys	Ser	Leu	Ala	Tyr	Phe	Leu	
			260					265					270			
Val	Ala	Pro	Thr	Leu	Cys	Tyr	Gln	Pro	Ser	Tyr	Pro	Arg	Thr	Pro	Tyr	
		275					280					285				
Ile	Arg	Lys	Gly	Trp	Leu	Phe	Arg	Gln	Leu	Val	Lys	Leu	Ile	Ile	Phe	
	290					295					300					
Thr	Gly	Val	Met	Gly	Phe	Ile	Ile	Asp	Gln	Tyr	Ile	Asn	Pro	Ile	Val	
305					310					315					320	
Gln	Asn	Ser	Gln	His	Pro	Leu	Lys	Gly	Asn	Leu	Leu	Tyr	Ala	Thr	Glu	
				325					330					335		
Arg	Val	Leu	Lys	Leu	Ser	Val	Pro	Asn	Leu	Tyr	Val	Trp	Leu	Cys	Met	
			340					345					350			
Phe	Tyr	Cys	Phe	Phe	His	Leu	Trp	Leu	Asn	Ile	Leu	Ala	Glu	Leu	Leu	
		355					360					365				

Arg Phe Gly Asp Arg Glu Phe Tyr Lys Asp Trp Trp Asn Ala Lys Thr  
 370 375 380  
 Val Glu Asp Tyr Trp Arg Met Trp Asn Met Pro Val His Lys Trp Met  
 385 390 395 400  
 Ile Arg His Leu Tyr Phe Pro Cys Leu Arg His Gly Leu Pro Lys Ala  
 405 410 415  
 Ala Ala Leu Leu Ile Ala Phe Leu Val Ser Ala Leu Phe His Glu Leu  
 420 425 430  
 Cys Ile Ala Val Pro Cys His Ile Phe Lys Leu Trp Ala Phe Gly Gly  
 435 440 445  
 Ile Met Phe Gln Val Pro Leu Val Leu Ile Thr Asn Tyr Leu Gln Asn  
 450 455 460  
 Lys Phe Arg Asn Ser Met Val Gly Asn Met Ile Phe Trp Phe Ile Phe  
 465 470 475 480  
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 <212> DNA  
 <213> Glycine max

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 actccatcag cagcgacgcc gccaatcgc aaccgcaaca aaaacaagac actgatttct 240  
 ccgtcctcaa attcgctac cgtccttcg tccccgctca tcgcaaagtg aaggaaagtc 300  
 cgctcagctc ccgacaccat tttccgtcag aagtcacgcg ggcctcttc aacctcctgt 360



atagtaagtc cntgttgctg tgaataagcc gactcatcat tgagaatttt aaatgaaata 420  
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<210> 18  
 <211> 38  
 <212> PRT  
 <213> Glycine max

<400> 18  
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 Arg Lys Val Lys Glu Ser Pro Leu Ser Ser Asp Thr Ile Phe Val Arg  
 20 25 30

Ser His Ala Gly Pro Leu  
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<210> 19  
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 <212> DNA  
 <213> Triticum aestivum

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ctatccggtg ntgtgatcct taaagtgtga accacantat atcctgggtt gtgnnttatgt 360  
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caactncaac aagtgtgtat cangttggcc caacactggg acaaccaatt taccgggcan 540  
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<211> 39  
<212> PRT  
<213> Triticum aestivum

<400> 20  
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Ile Val Val Leu Ile Ala Val Asn Ser Arg Leu Ile Ile Glu Asn Leu  
20 25 30

Met Lys Tyr Gly Leu Leu Ile  
35

<210> 21  
<211> 1975  
<212> DNA  
<213> Triticum aestivum

<220>  
<221> unsure  
<222> (93)

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cccagaccgg caccctcccg gcagcttcct cccttcccac ggcgggccgc caccgaaacc 180  
caaaaccccg ccccgaaact tccggaacct cccctccagt tccacccatg gccccgcccc 240  
gtccgtggcg gctgccacga tcgcgacgac ccctccctcc gcctccgccc cgccccgtgc 300  
gccgacggtc caccgagagg cggcgcatgg agcagccgca gcggcacgac gagatgccct 360  
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ccaaagtatt gaaaaggggt ctacacatgg cagttctatc gatgaggaaa acattaaagg 900  
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agtttttaca ggcttgatgg gcttcataat tgagcaatac attaatcaa ttgtgcagaa 1080  
ttcgaagcat ccattgaacg gaaatttctt ggatgctatt gagagagtct tgaaactctc 1140  
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tattctagcc gaactcctcc gttttgggtg tctggaattc tacaaggact ggtggaacgc 1260  
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attatgggca ttttctggaa tcatgtttca gattccctcg ctattcttga cgaaatatct 1500  
tcaagataag ttcaagaata caatgggtgg caacatgata ttttggttct tcttcagcat 1560  
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gcccagggca atggaggggc ggctcctta atgtttcgcc atgggctgtt agagcttgct 1740  
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cgttccaaat gtatgatatg ccggccgggg tgtgtaccga agatacccca gtgatgaagc 1860  
cgaagataac acgacctgcc acatgtgttt tgtgtatagc tttcggttca tgtgccagca 1920  
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<210> 22  
<211> 508  
<212> PRT  
<213> Triticum aestivum

<400> 22  
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Ser His Gly Gly Pro Pro Pro Lys Pro Lys Thr Pro Pro Arg Thr Phe  
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Ala	Ala	Thr	Ile	Ala	Thr	Thr	Pro	Pro	Ser	Ala	Ser	Ala	Ala	Pro	Leu	
		50				55					60					
Pro	Pro	Thr	Val	His	Gly	Glu	Ala	Ala	His	Gly	Ala	Ala	Ala	Ala	Ala	
65					70					75					80	
Arg	Arg	Asp	Ala	Leu	Leu	Pro	Gly	Val	Gly	Ala	Ala	His	Arg	Arg	Val	
				85					90					95		
Lys	Glu	Ser	Pro	Leu	Ser	Ser	Asp	Ala	Ile	Phe	Arg	Gln	Ser	His	Ala	
			100					105					110			
Gly	Leu	Leu	Asn	Leu	Cys	Ile	Val	Val	Leu	Ile	Ala	Val	Asn	Ser	Arg	
		115					120					125				
Leu	Ile	Ile	Glu	Asn	Leu	Met	Lys	Tyr	Gly	Leu	Leu	Ile	Arg	Ala	Gly	
	130					135					140					
Phe	Trp	Phe	Ser	Ala	Arg	Ser	Leu	Gly	Asp	Trp	Pro	Leu	Leu	Met	Cys	
145					150					155					160	
Cys	Leu	Thr	Leu	Pro	Ile	Phe	Pro	Leu	Ala	Ala	Leu	Met	Thr	Glu	Lys	
				165					170					175		
Trp	Ala	Gln	Arg	Lys	Leu	Ile	Arg	Asp	His	Val	Ser	Ile	Leu	Leu	His	
			180					185					190			
Ile	Ile	Ile	Thr	Thr	Thr	Val	Leu	Ile	Tyr	Pro	Val	Val	Val	Ile	Leu	
		195				200						205				
Lys	Cys	Glu	Ser	Ala	Val	Leu	Ser	Gly	Phe	Val	Leu	Met	Phe	Ile	Ala	
	210					215					220					
Ser	Ile	Thr	Trp	Leu	Lys	Leu	Val	Ser	Phe	Ala	His	Thr	Asn	Tyr	Asp	
225					230					235					240	
Ile	Arg	Ile	Leu	Ser	Gln	Ser	Ile	Glu	Lys	Gly	Ala	Thr	His	Gly	Ser	
				245					250					255		
Ser	Ile	Asp	Glu	Glu	Asn	Ile	Lys	Gly	Pro	Thr	Ile	Asn	Ser	Val	Val	
			260					265					270			
Tyr	Phe	Met	Leu	Ala	Pro	Thr	Leu	Cys	Tyr	Gln	Pro	Ser	Tyr	Pro	Arg	
		275					280					285				
Thr	Ala	Phe	Ile	Arg	Lys	Gly	Trp	Val	Thr	Arg	Gln	Leu	Ile	Lys	Cys	
	290					295					300					
Val	Val	Phe	Thr	Gly	Leu	Met	Gly	Phe	Ile	Ile	Glu	Gln	Tyr	Ile	Asn	
305					310					315					320	
Pro	Ile	Val	Gln	Asn	Ser	Lys	His	Pro	Leu	Asn	Gly	Asn	Phe	Leu	Asp	
				325					330					335		
Ala	Ile	Glu	Arg	Val	Leu	Lys	Leu	Ser	Val	Pro	Thr	Leu	Tyr	Val	Trp	
			340					345					350			

Leu Cys Met Phe Tyr Ser Phe Phe His Leu Trp Leu Asn Ile Leu Ala  
 355 360 365  
 Glu Leu Leu Arg Phe Gly Asp Arg Glu Phe Tyr Lys Asp Trp Trp Asn  
 370 375 380  
 Ala Lys Thr Val Glu Glu Tyr Trp Arg Met Trp Asn Met Pro Val His  
 385 390 395 400  
 Lys Trp Ile Val Arg His Ile Tyr Phe Pro Cys Ile Arg Asn Gly Leu  
 405 410 415  
 Ser Lys Gly Cys Ala Ile Leu Ile Ala Phe Leu Val Ser Ala Val Phe  
 420 425 430  
 His Glu Leu Cys Ile Ala Val Pro Cys His Ile Phe Lys Leu Trp Ala  
 435 440 445  
 Phe Ser Gly Ile Met Phe Gln Ile Pro Leu Leu Phe Leu Thr Lys Tyr  
 450 455 460  
 Leu Gln Asp Lys Phe Lys Asn Thr Met Val Gly Asn Met Ile Phe Trp  
 465 470 475 480  
 Phe Phe Phe Ser Ile Val Gly Gln Pro Met Cys Val Leu Leu Tyr Tyr  
 485 490 495  
 His Asp Val Met Asn Arg Gln Ala Gln Thr Asn Gly  
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 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:PCR primer

<400> 23  
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20

<210> 24  
 <211> 33  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:PCR primer

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33

<210> 25  
 <211> 497  
 <212> PRT  
 <213> Mus musculus

<400> 25  
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Val	Arg	Asp	Ala	Ala	Val	Ser	Pro	Asp	Leu	Gly	Ala	Gly	Gly	Asp	Ala		
		35					40					45					
Pro	Ala	Pro	Ala	Pro	Ala	Pro	Ala	His	Thr	Arg	Asp	Lys	Asp	Gly	Arg		
	50					55					60						
Thr	Ser	Val	Gly	Asp	Gly	Tyr	Trp	Asp	Leu	Arg	Cys	His	Arg	Leu	Gln		
	65				70					75					80		
Asp	Ser	Leu	Phe	Ser	Ser	Asp	Ser	Gly	Phe	Ser	Asn	Tyr	Arg	Gly	Ile		
			85						90					95			
Leu	Asn	Trp	Cys	Val	Val	Met	Leu	Ile	Leu	Ser	Asn	Ala	Arg	Leu	Phe		
		100						105					110				
Leu	Glu	Asn	Leu	Ile	Lys	Tyr	Gly	Ile	Leu	Val	Asp	Pro	Ile	Gln	Val		
	115						120					125					
Val	Ser	Leu	Phe	Leu	Lys	Asp	Pro	Tyr	Ser	Trp	Pro	Ala	Pro	Cys	Val		
	130					135					140						
Ile	Ile	Ala	Ser	Asn	Ile	Phe	Val	Val	Ala	Ala	Phe	Gln	Ile	Glu	Lys		
	145				150					155					160		
Arg	Leu	Ala	Val	Gly	Ala	Leu	Thr	Glu	Gln	Met	Gly	Leu	Leu	Leu	His		
				165					170						175		
Val	Val	Asn	Leu	Ala	Thr	Ile	Ile	Cys	Phe	Pro	Ala	Ala	Val	Ala	Leu		
		180						185					190				
Leu	Val	Glu	Ser	Ile	Thr	Pro	Val	Gly	Ser	Val	Phe	Ala	Leu	Ala	Ser		
	195						200					205					
Tyr	Ser	Ile	Met	Phe	Leu	Lys	Leu	Tyr	Ser	Tyr	Arg	Asp	Val	Asn	Leu		
	210					215					220						
Trp	Cys	Arg	Gln	Arg	Arg	Val	Lys	Ala	Lys	Ala	Val	Ser	Thr	Gly	Lys		
	225				230				235						240		
Lys	Val	Ser	Gly	Ala	Ala	Ala	Gln	Gln	Ala	Val	Ser	Tyr	Pro	Asp	Asn		
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Leu	Thr	Tyr	Arg	Asp	Leu	Tyr	Tyr	Phe	Ile	Phe	Ala	Pro	Thr	Leu	Cys		
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Tyr	Glu	Leu	Asn	Phe	Pro	Arg	Ser	Pro	Arg	Ile	Arg	Lys	Arg	Phe	Leu		
	275						280					285					
Leu	Arg	Arg	Val	Leu	Glu	Met	Leu	Phe	Phe	Thr	Gln	Leu	Gln	Val	Gly		
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Leu	Ile	Gln	Gln	Trp	Met	Val	Pro	Thr	Ile	His	Asn	Ser	Met	Lys	Pro		
	305				310					315					320		
Phe	Lys	Asp	Met	Asp	Tyr	Ser	Arg	Ile	Ile	Glu	Arg	Leu	Leu	Lys	Leu		
				325					330					335			

Ala Val Pro Asn His Leu Ile Trp Leu Ile Phe Phe Tyr Trp Phe Phe  
 340 345 350  
 His Ser Cys Leu Asn Ala Val Ala Glu Leu Leu Gln Phe Gly Asp Arg  
 355 360 365  
 Glu Phe Tyr Arg Asp Trp Trp Asn Ala Glu Ser Val Thr Tyr Phe Trp  
 370 375 380  
 Gln Asn Trp Asn Ile Pro Val His Lys Trp Cys Ile Arg His Phe Tyr  
 385 390 395 400  
 Lys Pro Met Leu Arg His Gly Ser Ser Lys Trp Val Ala Arg Thr Gly  
 405 410 415  
 Val Phe Leu Thr Ser Ala Phe Phe His Glu Tyr Leu Val Ser Val Pro  
 420 425 430  
 Leu Arg Met Phe Arg Leu Trp Ala Phe Thr Ala Met Met Ala Gln Val  
 435 440 445  
 Pro Leu Ala Trp Ile Val Gly Arg Phe Phe Gln Gly Asn Tyr Gly Asn  
 450 455 460  
 Ala Ala Val Trp Val Thr Leu Ile Ile Gly Gln Pro Val Ala Val Leu  
 465 470 475 480  
 Met Tyr Val His Asp Tyr Tyr Val Leu Asn Tyr Asp Ala Pro Val Gly  
 485 490 495

Val

<210> 26  
 <211> 520  
 <212> PRT  
 <213> Arabidopsis thaliana

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 35 40 45  
 Pro Ser Asp Asp Val Gly Ala Pro Ala Asp Val Arg Asp Arg Ile Asp  
 50 55 60  
 Ser Val Val Asn Asp Asp Ala Gln Gly Thr Ala Asn Leu Ala Gly Asp  
 65 70 75 80  
 Asn Asn Gly Gly Gly Asp Asn Asn Gly Gly Gly Arg Gly Gly Gly Glu  
 85 90 95  
 Gly Arg Gly Asn Ala Asp Ala Thr Phe Thr Tyr Arg Pro Ser Val Pro  
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Ala	His	Arg	Arg	Ala	Arg	Glu	Ser	Pro	Leu	Ser	Ser	Asp	Ala	Ile	Phe	
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Lys	Gln	Ser	His	Ala	Gly	Leu	Phe	Asn	Leu	Cys	Val	Val	Val	Leu	Ile	
	130					135					140					
Ala	Val	Asn	Ser	Arg	Leu	Ile	Ile	Glu	Asn	Leu	Met	Lys	Tyr	Gly	Trp	
145					150					155					160	
Leu	Ile	Arg	Thr	Asp	Phe	Trp	Phe	Ser	Ser	Arg	Ser	Leu	Arg	Asp	Trp	
				165					170					175		
Pro	Leu	Phe	Met	Cys	Cys	Ile	Ser	Leu	Ser	Ile	Phe	Pro	Leu	Ala	Ala	
			180					185					190			
Phe	Thr	Val	Glu	Lys	Leu	Val	Leu	Gln	Lys	Tyr	Ile	Ser	Glu	Pro	Val	
		195					200					205				
Val	Ile	Phe	Leu	His	Ile	Ile	Ile	Thr	Met	Thr	Glu	Val	Leu	Tyr	Pro	
	210					215					220					
Val	Tyr	Val	Thr	Leu	Arg	Cys	Asp	Ser	Ala	Phe	Leu	Ser	Gly	Val	Thr	
225					230					235					240	
Leu	Met	Leu	Leu	Thr	Cys	Ile	Val	Trp	Leu	Lys	Leu	Val	Ser	Tyr	Ala	
				245				250						255		
His	Thr	Ser	Tyr	Asp	Ile	Arg	Ser	Leu	Ala	Asn	Ala	Ala	Asp	Lys	Ala	
			260					265					270			
Asn	Pro	Glu	Val	Ser	Tyr	Tyr	Val	Ser	Leu	Lys	Ser	Leu	Ala	Tyr	Phe	
		275					280					285				
Met	Val	Ala	Pro	Thr	Leu	Cys	Tyr	Gln	Pro	Ser	Tyr	Pro	Arg	Ser	Ala	
	290					295					300					
Cys	Ile	Arg	Lys	Gly	Trp	Val	Ala	Arg	Gln	Phe	Ala	Lys	Leu	Val	Ile	
305					310					315					320	
Phe	Thr	Gly	Phe	Met	Gly	Phe	Ile	Ile	Glu	Gln	Tyr	Ile	Asn	Pro	Ile	
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Val	Arg	Asn	Ser	Lys	His	Pro	Leu	Lys	Gly	Asp	Leu	Leu	Tyr	Ala	Ile	
			340					345					350			
Glu	Arg	Val	Leu	Lys	Leu	Ser	Val	Pro	Asn	Leu	Tyr	Val	Trp	Leu	Cys	
		355					360					365				
Met	Phe	Tyr	Cys	Phe	Phe	His	Leu	Trp	Leu	Asn	Ile	Leu	Ala	Glu	Leu	
	370					375					380					
Leu	Cys	Phe	Gly	Asp	Arg	Glu	Phe	Tyr	Lys	Asp	Trp	Trp	Asn	Ala	Lys	
385					390					395					400	
Ser	Val	Gly	Asp	Tyr	Trp	Arg	Met	Trp	Asn	Met	Pro	Val	His	Lys	Trp	
				405					410					415		
Met	Val	Arg	His	Ile	Tyr	Phe	Pro	Cys	Leu	Arg	Ser	Lys	Ile	Pro	Lys	
			420					425					430			



Thr Leu Ala Ile Ile Ile Ala Phe Leu Val Ser Ala Val Phe His Glu  
 435 440 445  
 Leu Cys Ile Ala Val Pro Cys Arg Leu Phe Lys Leu Trp Ala Phe Leu  
 450 455 460  
 Gly Ile Met Phe Gln Val Pro Leu Val Phe Ile Thr Asn Tyr Leu Gln  
 465 470 475 480  
 Glu Arg Phe Gly Ser Thr Val Gly Asn Met Ile Phe Trp Phe Ile Phe  
 485 490 495  
 Cys Ile Phe Gly Gln Pro Met Cys Val Leu Leu Tyr Tyr His Asp Leu  
 500 505 510  
 Met Asn Arg Lys Gly Ser Met Ser  
 515 520

09/856,018

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Directory of A:\

File not found

1,457,664 bytes free

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onscreen message when STIC PC tried to read submitted disk